Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force

**DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0101313F: STRAT WAR PLANNING SYS - USSTRATCOM

BA 7: Operational Systems Development

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	17.013	33.746	28.441	0.000	28.441	20.026	20.223	9.940	10.109	Continuing	Continuing
675059: Strategic War Planning System (SWPS)	10.614	10.429	18.904	0.000	18.904	10.434	10.481	0.000	0.000	0.000	0.000
675282: Joint Navigation Warfare Center (JNWC)	6.399	8.267	9.529	0.000	9.529	9.583	9.729	9.924	10.092	Continuing	Continuing
675368: GSIN (Global Sensor Integrated Network)	0.000	15.050	0.008	0.000	0.008	0.009	0.013	0.016	0.017	Continuing	Continuing

#### Note

In FY2010 Project 5368, Global Sensor Integrated Network (GSIN) transferred from PE 0105921F, Service Support to STRATCOM Space Activities, in order to better align effort and appropriation.

## A. Mission Description and Budget Item Justification

The mission of USSTRATCOM is to establish and provide full-spectrum global strike, coordinated space and information operations capabilities to meet both deterrent and decisive national security objectives, and to provide operational space support, integrated missile defense, Global Command Control Communications and Computers Intelligence Surveillance and Reconnaissance (C4ISR), and specialized planning expertise to the joint warfighter. This mission has been defined by the 2002 Unified Command Plan (UCP) changes 1 and 2. To enable completion of these missions, USSTRATCOM is modernizing the Integrated Strategic Planning and Analysis Network (ISPAN) (formerly known as SWPS), developing information systems and techniques to counter and conduct Navigation Warfare (NAVWAR) and establishing a unified national architecture integrating disparate Missile Warning/Missile Defense (MW/MD) systems into a single Internet Protocol (IP)-based system known as the Global Sensor Integrated Network (GSIN) to provide redundant and unambiguous MW/MD data to national leadership.

When the ISPAN modernization is complete the system will support the warfighter in both deliberate and adaptive planning environments while allowing the National Command Authorities to employ the full spectrum of kinetic and non-kinetic weapons. The ISPAN system will continue to evolve as weapon systems are matured, new systems are developed, and the threat changes, particularly in the area of worldwide proliferation of Weapons of Mass Destruction (WMD).

Navigation Warfare (NAVWAR) is a warfighting application of electronic warfare (EW), Information Operations (IO) and space control (SC) employing various techniques and technologies to negate or prevent hostile use of positioning, navigation, and timing (PNT) information and protect unimpeded use of PNT information by U.S., Allied, and Coalition Forces while not unduly disrupting peaceful use outside an area of operation. The Joint Navigation Warfare Center (JNWC) was established

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0101313F: STRAT WAR PLANNING SYS - USSTRATCOM

BA 7: Operational Systems Development

to integrate and coordinate NAVWAR PNT capabilities across the mission areas of intelligence, surveillance, reconnaissance, information operations, electronic warfare, and space control. The JNWC is also commissioned to integrate NAVWAR into space operations and assists the warfighter with subject matter expertise to "operationalize" NAVWAR, encouraging the NAVWAR view that the Global Positioning System is a taskable weapons system in addition to being a worldwide PNT service. The JNWC establishes and maintains the Department's premier basis of NAVWAR expertise, and provides subject matter expertise and knowledge support to warfighters, Department decision makers, the Federal Interagency (the Department of Homeland Security and other civil agencies concerned with the Critical National Infrastructure), and the coalition through testing and evaluation; modeling, simulation and analysis; and exercise and training support.

The Nation's strategic C2, sensors and mission planning programs can not rapidly exchange information across multiple missions, creating ambiguity that delays time critical national C2 decision making processes. GSIN establishes a unified national architecture integrating disparate MW/MD systems into a single IP-based system providing redundant and unambiguous MW/MD data to national leadership. GSIN nets together all sensors, from tactical to strategic, including the Nation's most modern and capable assets - taking advantage of their larger numbers, improved algorithms, mobility and forward deployment to provide earlier cross-cueing and expanded decision space when every second counts. GSIN will permit an IP-based UDOP to augment voice conferencing and rapidly build a single, unambiguous missile event picture allowing real-time senior collaboration for nuclear C2 and improved senior leader situational awareness (SA) and decision-making.

All SWPS development efforts (including ISPAN, JNWC and GSIN development activities) are in budget activity 7, Operational System Development, because their systems are operational, and currently support capabilities to create, verify, and produce OPLAN 8010, meet new UCP taskings, and produce other products.

## B. Program Change Summary (\$ in Millions)

<u>, ση συνατισή το συνατισή</u>	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	17.505	33.836	0.000	0.000	0.000
Current President's Budget	17.013	33.746	28.441	0.000	28.441
Total Adjustments	-0.492	-0.090	28.441	0.000	28.441
<ul> <li>Congressional General Reductions</li> </ul>		0.000			
<ul> <li>Congressional Directed Reductions</li> </ul>		0.000			
<ul> <li>Congressional Rescissions</li> </ul>	0.000	0.000			
Congressional Adds		0.000			
<ul> <li>Congressional Directed Transfers</li> </ul>		0.000			
Reprogrammings	0.000	0.000			
SBIR/STTR Transfer	0.000	0.000			
<ul> <li>Other Adjustments</li> </ul>	-0.492	-0.090	28.441	0.000	28.441
Other Adjustments	-0.432	0.000	20.441	0.000	20.441

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Ford	ce	DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0101313F: STRAT WAR PLANNING SYS - U	JSSTRATCOM
Change Summary Explanation		
<ul> <li>FY10 increase is for the Global Sensor Integrated Networ</li> <li>FY11decrease reflects completion of the ISPAN Block 1 expriorities.</li> </ul>		ction of GSIN development for higher Air Force

Exhibit R-2A, RDT&E Project Jus	tification: Pl	B 2011 Air F	orce						<b>DATE</b> : Feb	DATE: February 2010		
APPROPRIATION/BUDGET ACTIV 3600: Research, Development, Tes BA 7: Operational Systems Develo		R-1 ITEM NOMENCLATURE PE 0101313F: STRAT WAR PLANNING SYS - USSTRATCOM PROJECT 675059: (SWPS)					Strategic War Planning System					
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost	
675059: Strategic War Planning System (SWPS)	10.614	10.429	18.904	0.000	18.904	10.434	10.481	0.000	0.000	0.000	0.000	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0			

#### A. Mission Description and Budget Item Justification

The mission of USSTRATCOM is to establish and provide full-spectrum global strike, coordinated space and information operations capabilities to meet both deterrent and decisive national security objectives, and to provide operational space support, integrated missile defense, Global Command Control Communications and Computers Intelligence Surveillance and Reconnaissance (C4ISR), and specialized planning expertise to the joint warfighter. This mission has been defined by the 2002 Unified Command Plan (UCP) changes 1 and 2. To enable these missions, the Integrated Strategic Planning and Analysis Network (ISPAN) (formerly known as SWPS) must be capable of both deliberate and adaptive planning employing the full spectrum of kinetic and non-kinetic weapons. The planning system will continue to evolve as weapon systems are matured, new systems are developed, and the threat changes, particularly in the area of worldwide proliferation of Weapons of Mass Destruction (WMD).

The ISPAN modernization program includes initiation of Course of Action (COA) Development as a service to the DoD enterprise, workflow and decision support development, Combatant Commander (COCOM) Collaboration (Global Operations Center Collaborative Environment (GOC CE), User Defined Operational Picture (UDOP)), conventional mission planning integration, and Mission Planning Analysis System (MPAS) maintenance and modernization. This includes software coding, integration of multiple internal and external planning applications, as well as developmental and early operational test activities. ISPAN also includes automated data processing equipment (ADPE), software, facilities support, manpower, and training to support the mission objectives of ISPAN, associated deployable and distributed data processing nodes, and subsidiary systems. Activities also include studies and analysis to support both current program planning and execution and future program planning.

## B. Accomplishments/Planned Program (\$ in Millions)

			FY 2011	FY 2011	FY 2011	
	FY 2009	FY 2010	Base	oco	Total	
MAJOR THRUST: ISPAN Block 1 Modernization (MPAS)	1.484	0.000	0.000	0.000	0.000	

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: Febr	uary 2010	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0101313F: STRAT WAR PLANN USSTRATCOM	IING SYS -	PROJECT SYS - 675059: Strategic War Planning Sy (SWPS)			
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: In FY 2009: Funds completed development of the Dynamic Appl (DARTS) and of a Graphical Editor for the legacy Mission Planning						
FY 2010 Plans: In FY 2010: N/A						
FY 2011 Base Plans: In FY 2011: N/A						
FY 2011 OCO Plans: In FY 2011 OCO: N/A						
MAJOR THRUST: ISPAN Block 1 Modernization (CIE)		3.539	0.000	0.000	0.000	0.000
FY 2009 Accomplishments: In FY 2009: Funds developed, integrated and tested ISPAN Plan were not limited to, completion of required Systems Engineering, of existing software tools to interface with newly developed ISPA establish a service oriented N-Tier architecture for the ISPAN apparent applications collectively form the ISPAN Collaborative Inform	development of new and modification N tools. The primary focus was to plication. The new and modified tools					
FY 2010 Plans: In FY 2010: N/A						
FY 2011 Base Plans: In FY 2011: N/A						
		ı	1	ı		

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: Feb	uary 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0101313F: STRAT WAR PLANI USSTRATCOM	PE 0101313F: STRAT WAR PLANNING SYS - 675059:					
B. Accomplishments/Planned Program (\$ in Millions)	·						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
FY 2011 OCO Plans: In FY 2011 OCO: N/A							
MAJOR THRUST: ISPAN Block 1 Post-IOC Enhancement		5.591	2.800	0.000	0.000	0.000	
FY 2009 Accomplishments: In FY 2009: Funds used to expand user base at distributed of Distributed Enhancement (GDE), (complete) Enterprise Service enhancements, improve Global Situational Awareness tool peenhancements.	ce Bus migration and technology						
FY 2010 Plans: In FY 2010: Funds will be used to develop Post IOC enhance solutions for Information Assurance deficiencies.	ements for web services and develop						
FY 2011 Base Plans: In FY 2011: N/A							
FY 2011 OCO Plans: In FY 2011 OCO: N/A							
MAJOR THRUST: ISPAN Increment 2 Modernization		0.000	7.629	17.904	0.000	17.904	
FY 2009 Accomplishments: In FY 2009: N/A							
FY 2010 Plans: In FY 2010: Funds will be used for pre and post Milestone Beincrement of planning tools for the ISPAN Collaborative Inforn continues by building on capabilities delivered in Block 1. Inc.	nation Environment (CIE). Increment 2						

**UNCLASSIFIED** 

R-1 Line Item #121 Page 6 of 28

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: Febr	uary 2010			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0101313F: STRAT WAR PLANNI USSTRATCOM	NG SYS -	PROJECT 675059: Str (SWPS)	875059: Strategic War Planning Syst				
B. Accomplishments/Planned Program (\$ in Millions)								
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total		
support capabilities for senior leader situational awareness threvisualization, and expand development of services and operations services and distributed operation.  FY 2011 Base Plans: In FY 2011: Funds will complete development, integrate and to enhanced data analysis and visualization and GIG Enterprises.	onal nodes to support GIG Enterprise est the advanced decision support,							
FY 2011 OCO Plans: In FY 2011 OCO: N/A	Service dapasimiles illimated ill 1 170.							
MAJOR THRUST: ISPAN Increment 3 Modernization		0.000	0.000	1.000	0.000	1.000		
FY 2009 Accomplishments: In FY 2009: N/A								
FY 2010 Plans: In FY 2010: N/A								
FY 2011 Base Plans: In FY 2011: Funds pre-Milestone B risk reduction activities for for the ISPAN Collaborative Information Environment (CIE). B developed in Block 1 and Increment 2, to achieve a more compoperation planning process that includes collaborative campaig COA development to meet the desired crisis action and time seems.	uilds on the capabilities and technology plete implementation of the joint gn/contingency planning and integrated							
FY 2011 OCO Plans: In FY 2011 OCO: N/A								
Accor	mplishments/Planned Programs Subtotals	10.614	10.429	18.904	0.000	18.904		

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force	DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
3600: Research, Development, Test & Evaluation, Air Force	PE 0101313F: STRAT WAR PLANNING SYS -	675059: St	rategic War Planning System
BA 7: Operational Systems Development	USSTRATCOM	(SWPS)	

## C. Other Program Funding Summary (\$ in Millions)

			<u>FY 2011</u>	<u>FY 2011</u>	<u>FY 2011</u>					Cost To	
<u>Line Item</u>	FY 2009	FY 2010	<b>Base</b>	OCO	<u>Total</u>	FY 2012	FY 2013	FY 2014	FY 2015	<b>Complete</b>	Total Cost
PE 0101313F: Strategic War	12.487	13.212	13.344	0.000	13.344	13.588	13.823	6.877	6.989	0.000	0.000
Planning Systems (OPAF)											

#### **D. Acquisition Strategy**

ISPAN will develop and modernize strategic planning tools for the combatant commanders using an evolutionary acquisition strategy with development contracts that are negotiated and awarded in a competitive environment.

## **E. Performance Metrics**

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

TO, TET GET TOJOU GOST ANALYSIS: 1 B 2011 7 III 1 0100

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PE 0101313F: STRAT WAR PLANNING SYS -

USSTRATCOM

PROJECT

**DATE:** February 2010

675059: Strategic War Planning System

(SWPS)

## **Product Development (\$ in Millions)**

				FY 2	010	FY 2 Ba	2011 ise	FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Air Vehicle Planning System (APS)	TM	BAE San Diego, CA	0.000	0.000		0.000		0.000		0.000	0.000	0.000	47.100
Missile Graphics Planning System (MGPS)	C/CPAF	Northrop Grumman Bellevue, NE	1.484	0.000		0.000		0.000		0.000	0.000	1.484	41.000
Targeting	C/CPAF	SAIC San Diego, Ca	0.000	0.000		0.000		0.000		0.000	0.000	0.000	36.200
ISPAN Modernization	C/CPAF	Lockheed Martin Integrated Systems Papillion, NE	6.385	7.692	Oct 2009	16.167	Oct 2010	0.000		16.167	25.181	55.425	164.783
Miscellaneous Contracts	C/CPAF	TBD TBD	2.745	2.737	Oct 2009	2.737	Oct 2010	0.000		2.737	5.546	13.765	Continuing
Classified Project (FY08 Supplemental)	TBD/TBD	TBD TBD	0.000	0.000		0.000		0.000		0.000	0.000	0.000	0.000
		Subtotal	10.614	10.429		18.904		0.000		18.904	30.727	70.674	

#### Remarks

	Total Prior Years Cost	FY 2010		2011 ise	FY 2	-	FY 2011 Total	Cost To	Total Cost	Target Value of Contract
Project Cost Totals	10.614	10.429	18.904		0.000		18.904	30.727	70.674	

#### Remarks

Total Prior Years Cost may include only FY 2009 data.

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

**DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0101313F: STRAT WAR PLANNING SYS -

USSTRATCOM

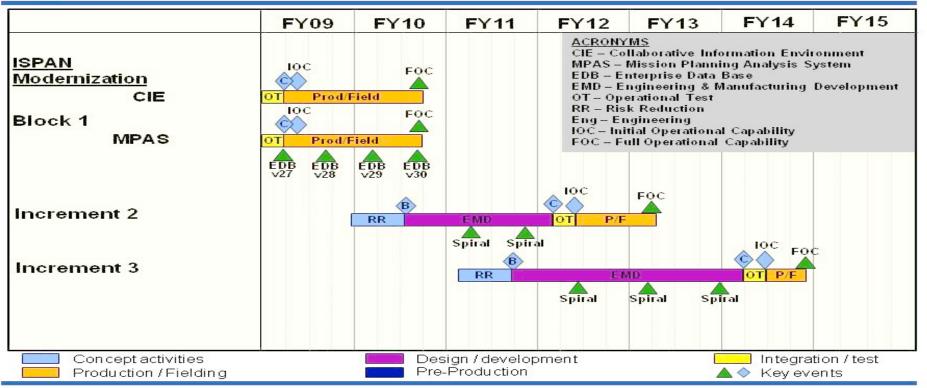
**PROJECT** 

675059: Strategic War Planning System

(SWPS)



# ISPAN Block 1 / Increment Schedule



11APOM R-Docs

Depicted by in stallation/production flow

R-1 Line Item #121 Page 10 of 28

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force		<b>DATE:</b> February 2010
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
3600: Research, Development, Test & Evaluation, Air Force	PE 0101313F: STRAT WAR PLANNING SYS -	675059: Strategic War Planning System
BA 7: Operational Systems Development	USSTRATCOM	(SWPS)

# Schedule Details

	St	art	End		
Event	Quarter	Year	Quarter	Year	
ISPAN Block 1 MS C	2	2009	2	2009	
ISPAN Block 1 IOC	2	2009	2	2009	
ISPAN Increment 2 MS B	3	2010	3	2010	
ISPAN Block 1 FOC	3	2010	3	2010	
ISPAN Increment 2 development	3	2010	4	2011	
ISPAN Increment 3 MS B	3	2011	3	2011	
ISPAN Increment 3 development	4	2011	4	2011	

Exhibit R-2A, RDT&E Project Just	ification: Pl	B 2011 Air F	orce						DATE: Feb	ruary 2010	
APPROPRIATION/BUDGET ACTIV 3600: Research, Development, Test BA 7: Operational Systems Develop			TURE WAR PLANN	IING SYS -	PROJECT 675282: Joint Navigation Warfare Center (JNWC)						
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
675282: Joint Navigation Warfare Center (JNWC)	6.399	8.267	9.529	0.000	9.529	9.583	9.729	9.924	10.092	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

#### A. Mission Description and Budget Item Justification

Navigation Warfare (NAVWAR) is a warfighting application of electronic warfare (EW), Information Operations (IO), and space control (SC) employing various techniques and technologies to negate or prevent hostile use of positioning, navigation, and timing (PNT) information and protect unimpeded use of PNT information by U.S., Allied, and Coalition Forces while not unduly disrupting peaceful use outside an area of operation. The Joint Navigation Warfare Center (JNWC) integrates and coordinates NAVWAR PNT capabilities across the mission areas of intelligence, surveillance, reconnaissance, information operations, electronic warfare, cyber and space control. The JNWC establishes and maintains the Department's premier basis of NAVWAR expertise, and provides subject matter expertise and knowledge support to warfighters, Department decision makers, the Federal Interagency (the Department of Homeland Security and other civil agencies concerned with the Critical National Infrastructure), and the coalition through testing and evaluation; modeling, simulation and analysis; and exercise and training support. In recent years, the Global Positioning System (GPS) has become one of the most critical enablers of modern, advanced technology warfare. In an era where everything from advanced weapons systems to basic goods and services are tracked or guided by navigation systems such as GPS, Navigation Warfare is an interest and concern, especially if those systems are interrupted or lost. Likewise, as Global Navigation Satellite Systems (GNSS) proliferate, it becomes necessary to consider not only denying adversary use of GPS but also negating adversary use of alternate GNSS systems for PNT. The primary mission of the JNWC is to provide joint warfighter NAVWAR support through three broad mission areas:

- a. Warfighter Operational Support The JNWC applies knowledge of PNT vulnerabilities, prevention capabilities, and system operations to integrate NAVWAR as an element of warfighting operations. The JNWC provides reach-back capabilities to assist in resolving NAVWAR issues, address situations involving degradation or denial of PNT capabilities, and recommend actions to mitigate effects of both hostile and non-hostile events. The JNWC develops and maintains current information for the warfighter and theater commanders to include assessments of adversary capabilities, assessments of coalition capabilities and limitations, and other topics of special interest. The JNWC also provides subject matter expertise and knowledge support to Department acquisition and policy decision makers, the Federal Interagency (the Department of Homeland Security and other civil agencies concerned with the Critical National Infrastructure), and the coalition.
- b. Test, Training, Exercises, and Experiments This JNWC mission area is the centerpiece for maintaining NAVWAR currency of information for the warfighter. The JNWC conducts annual NAVWAR field test events, and provides NAVWAR technical assistance for training, exercises and experiments. The JNWC, as part of this effort, maintains Integrated Joint NAVWAR Test Roadmaps and current intelligence products on adversary NAVWAR capabilities and Coalition NAVWAR capabilities

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force		<b>DATE</b> : February 2010
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
3600: Research, Development, Test & Evaluation, Air Force	PE 0101313F: STRAT WAR PLANNING SYS -	675282: Joint Navigation Warfare Center
BA 7: Operational Systems Development	USSTRATCOM	(JNWC)

and vulnerabilities. JNWC GYPSY field test events focus on fielded operational systems and capabilities to integrate NAVWAR and PNT operations, to baseline current NAVWAR electronic protection, support, and attack capabilities, and to assist warfighters optimize and deconflict theater/tactical assets. JNWC FORTUNE field test events are more engineering focused and are used to evaluate specific NAVWAR capabilities or vulnerabilities, and to reduce engineering risk for GYPSY events. Test, training, exercise and experiment activities: 1) prepare the joint warfighter for operations in current and rapidly evolving NAVWAR threat environments; 2) establish priorities, standardized operational procedures for tactics, techniques, and procedures; 3) test electronic attack CONOPs to endure deconfliction and optimization with other operations to mitigate blue force fratricide; and 4) evolve standardized test methods.

c. Navigation Warfare Information Analysis Center (IAC) – The JNWC develops and maintains methods, standards, models and simulations used in NAVWAR analysis and operates the NAVWAR Information Analysis Center (IAC). JNWC evaluates new models for accuracy and applicability to specific situations and rapidly evolving threat environments. It also develops and maintains standard test methodologies created solely by the U.S. as well as test methods developed in collaboration with coalition partners. These standard methodologies ensure data sharing is efficient and effective, and ensures accurate feedback to the operational communities. The JNWC, as part of this effort, manages the GPS EA Frequency Clearance process and conducts independent analysis and verification of EA frequency clearance requests. It also maintains and upgrades the GPS-RPM GPS frequency clearance model as required and conducts modeling and simulation exercises on GPS interference to include test and exercise threat laydowns for DoD organizations unable to perform their own modeling. The NAVWAR IAC serves as a source of NAVWAR information and technical expertise for DoD researchers, engineers, program managers, warfighters, testers, and others. It collects, analyzes, synthesizes, and disseminates scientific and technical information in clearly defined specialized subject areas. It promotes standardization by: 1) providing indepth analyses; 2) creating products that respond to technical inquiries; 3) preparing state-of-the-art reports, handbooks, and databases; 4) conducting technology assessments; and 5) supporting the exchange of information within the NAVWAR community.

Activities also include studies and analysis to support both current program planning and execution and future program planning.

## B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: NAVWAR Operational Warfighter Support	1.455	1.780	2.223	0.000	2.223
FY 2009 Accomplishments: In FY 2009: Funds provided COCOM reachback analysis and develop adversary, threat and intel assessments.					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: Febr	uary 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0101313F: STRAT WAR PLANI USSTRATCOM	NING SYS -	PROJECT 675282: Jo (JNWC)	82: Joint Navigation Warfare Center			
B. Accomplishments/Planned Program (\$ in Millions)			'				
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
FY 2010 Plans: In FY 2010: Funds will provide COCOM reachback analysis an assessments.	nd develop adversary, threat and intel						
FY 2011 Base Plans: In FY 2011: Funds will provide COCOM reachback analysis an assessments.	nd develop adversary, threat and intel						
FY 2011 OCO Plans: In FY 2011 OCO: N/A							
MAJOR THRUST: NAVWAR Test, Training, Exercises and Experin	nents	2.447	3.041	3.502	0.000	3.502	
FY 2009 Accomplishments: In FY 2009: Funds used to support FORTUNE and GYPSY Figure Exercises and Experiments.	eld Tests, NATO trials, U.S. PNT Tests,						
FY 2010 Plans: In FY 2010: Funds will support FORTUNE and GYPSY Field T Exercises and Experiments.	ests, NATO trials, U.S. PNT Tests,						
FY 2011 Base Plans: In FY 2011: Funds will support FORTUNE and GYPSY Field T Exercises and Experiments.	ests, NATO trials, U.S. PNT Tests,						
FY 2011 OCO Plans: In FY 2011 OCO: N/A							
MAJOR THRUST: NAVWAR Modeling, Simulation, Tools and Metr	nods	2.497	3.446	3.804	0.000	3.804	

**UNCLASSIFIED** 

R-1 Line Item #121 Page 14 of 28

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force			<b>DATE</b> : February 2010
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
3600: Research, Development, Test & Evaluation, Air Force	PE 0101313F: STRAT WAR PLANNING SYS -	675282: Joi	int Navigation Warfare Center
BA 7: Operational Systems Development	USSTRATCOM	(JNWC)	

## B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: In FY 2009: Funds used to support Information Analysis Center (IAC), develop Global Positioning System Reliability Prediction Model (GPS-RPM) Upgrades, GPS frequency clearance evaluations, modeling and simulation methodologies, standards and analysis.					
FY 2010 Plans: In FY 2010: Funds will support the Information Analysis Center (IAC), develop Global Positioning System Reliability Prediction Model (GPS-RPM) Upgrades, GPS frequency clearance evaluations, modeling and simulation methodologies, standards and analysis.					
FY 2011 Base Plans: In FY 2011: Funds will support the Information Analysis Center (IAC), develop Global Positioning System Reliability Prediction Model (GPS-RPM) Upgrades, GPS frequency clearance evaluations, modeling and simulation methodologies, standards and analysis.					
FY 2011 OCO Plans: In FY 2011 OCO: N/A					
Accomplishments/Planned Programs Subtotals	6.399	8.267	9.529	0.000	9.529

# C. Other Program Funding Summary (\$ in Millions)

			FY 2011	FY 2011	FY 2011					Cost To	
<u>Line Item</u>	FY 2009	FY 2010	<u>Base</u>	OCO	<u>Total</u>	FY 2012	FY 2013	FY 2014	FY 2015	<b>Complete</b>	<b>Total Cost</b>
PE Not Provided (3121): Activity	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Not Provided											

## **D. Acquisition Strategy**

NAVWAR will investigate, test, and simulate potential threats and mitigation strategies for preventing the hostile use of Positioning, Navigation and Timing (PNT) information through the use of competitive contracts and selective employment of government agencies.

## **UNCLASSIFIED**

R-1 Line Item #121 Page 15 of 28

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0101313F: STRAT WAR PLANNING SYS - USSTRATCOM	PROJECT 675282: Jos (JNWC)	int Navigation Warfare Center
E. Performance Metrics Please refer to the Performance Base Budget Overview Book for Force performance goals and most importantly, how they contribute	information on how Air Force resources are applied an	, ,	resources are contributing to Air

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

**DATE:** February 2010 **PROJECT** 

APPROPRIATION/BUDGET ACTIVITY

**R-1 ITEM NOMENCLATURE** 3600: Research, Development, Test & Evaluation, Air Force PE 0101313F: STRAT WAR PLANNING SYS -

675282: Joint Navigation Warfare Center (JNWC)

BA 7: Operational Systems Development

USSTRATCOM

Support (\$ in Millions)

				FY 2	:010	FY 2 Ba		FY 2		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
NAVWAR Warfighter Operational Support	ТМ	Overlook Systems Technologies Inc Vienna VA; Kirtland AFB, NM	1.455	1.780	Nov 2009	2.223	Nov 2010	0.000		2.223	Continuing	Continuing	Continuing
NAVWAR Modeling, Simulation, Tools & Methods and Integrated Analysis Center	ТМ	Overlook Systems Technologies Inc Vienna VA; Kirtland AFB, NM	2.497	3.446	Nov 2009	3.804	Nov 2010	0.000		3.804	Continuing	Continuing	Continuing
		Subtotal	3.952	5.226		6.027		0.000		6.027			

#### **Remarks**

Test and Evaluation (\$ in Millions)

				FY 2	2010	FY 2 Ba	-	FY 2 OC		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
FORTUNE and GYPSY field tests, NATO trials, US Tests, Exercises and Experiments	РО	Overlook Systems Technologies Inc Vienna VA; Kirtland AFB, NM	2.447	3.041	Nov 2009	3.502	Nov 2010	0.000		3.502	Continuing	Continuing	Continuin
,		Subtotal	2.447	3.041		3.502		0.000		3.502			

## **UNCLASSIFIED**

R-1 Line Item #121 Page 17 of 28

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

**DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0101313F: STRAT WAR PLANNING SYS -

USSTRATCOM

**PROJECT** 

675282: Joint Navigation Warfare Center

(JNWC)

## **Test and Evaluation (\$ in Millions)**

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract

#### Remarks

Multiple Government Agencies and Test Ranges

	Total Prior	otal Prior		FY	2011	FY 2011	FY 2011	Cost To		Target Value of
	Years Cost	FY 2	FY 2010		ise	осо	Total	Complete	Total Cost	Contract
Project Cost Totals	6.399	8.267		9.529		0.000	9.529			

#### Remarks

Total Prior Years Cost may include only FY 2009 data.

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

**DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0101313F: STRAT WAR PLANNING SYS -

**USSTRATCOM** 

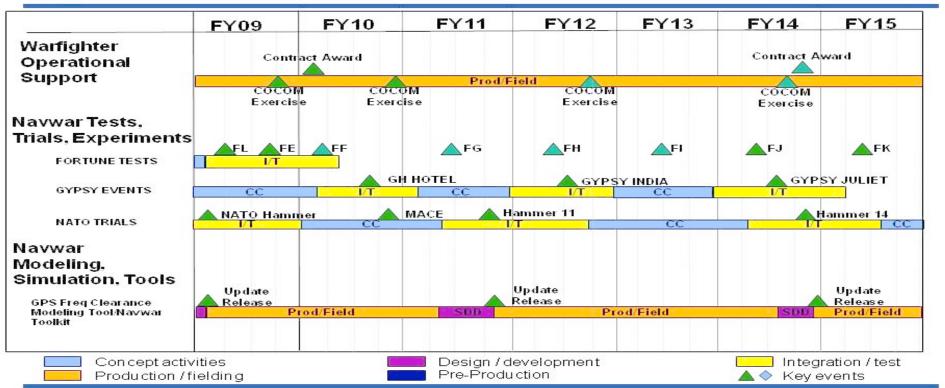
**PROJECT** 

675282: Joint Navigation Warfare Center

(JNWC)



# Navwar Program Schedule



PB10 R-Docs

R-1 Line Item #121 Page 19 of 28

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

BA 7: Operational Systems Development

DATE: February 2010

R-1 ITEM NOMENCLATURE
PE 0101313F: STRAT WAR PLANNING SYS - USSTRAT WAR PLANNING SYS - USSTRATCOM

USSTRATCOM

DATE: February 2010

## Schedule Details

	St	End		
Event	Quarter	Year	Quarter	Year
NAVWAR Operational Support Contract Award	1	2010	1	2010
NAVWAR Test, Training, Exercises and Experiments - FORTUNE Field Tests	2	2009	2	2011
NAVWAR Test, Training, Exercises & Experiments - GYPSY HOTEL Tests	3	2010	3	2010
NAVWAR Test, Training, Exercises & Experiments - NATO Trials & Exercises	1	2009	4	2011
GPS Frequency Clearance	1	2009	4	2011

Exhibit R-2A, RDT&E Project Just	t <b>ification:</b> Pl	3 2011 Air F	orce					<b>DATE</b> : February 2010				
APPROPRIATION/BUDGET ACTIV 3600: Research, Development, Tes BA 7: Operational Systems Develop	t & Evaluatio	n, Air Force				TURE WAR PLANN	IING SYS -	PROJECT 675368: GSIN (Global Sensor Integrated Network)				
COST (\$ in Millions)	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost			
675368: GSIN (Global Sensor Integrated Network)	0.000	15.050	0.008	0.000	0.008	0.009	0.013	0.016	0.017	Continuing	Continuing	
Quantity of RDT&E Articles	0	0	0	0	0	0	0					

#### Note

In FY2010 Project 5368, Global Sensor Integrated Network (GSIN) transferred from PE 0105921F, Service Support to STRATCOM Space Activities, in order to better align effort and appropriation.

#### A. Mission Description and Budget Item Justification

The mission of USSTRATCOM is to establish and provide full-spectrum global strike, coordinated space and information operations capabilities to meet both deterrent and decisive national security objectives, and to provide operational space support, integrated missile defense, Global Command Control Communications and Computers Intelligence Surveillance and Reconnaissance (C4ISR), and specialized planning expertise to the joint warfighter. This mission has been defined by the 2002 Unified Command Plan (UCP) changes 1 and 2. GSIN nets together all sensors, from tactical to strategic, including the Nation's most modern and capable assets - taking advantage of their larger numbers, improved algorithms, mobility and forward deployment to provide earlier cross-cueing and expanded decision space when every second counts. GSIN will permit an IP-based User Defined Operating Picture (UDOP) to augment voice conferencing and rapidly build a single, unambiguous missile event picture allowing real-time senior collaboration for nuclear C2 and improved senior leader situational awareness (SA) and decision-making.

The Nation's strategic C2, sensors and mission planning programs can not rapidly exchange information across multiple missions, creating ambiguity that delays time critical national C2 decision making processes. The problem is most evident in the Department's missile warning (MW) and missile defense (MD) programs. GSIN establishes a unified national architecture integrating disparate MW/MD systems into a single IP-based system providing redundant and unambiguous MW/MD data to national leadership.

Activities also include studies and analysis to support both current program planning and execution and future program planning.

## B. Accomplishments/Planned Program (\$ in Millions)

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: Febr	uary 2010					
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0101313F: STRAT WAR PLANN USSTRATCOM	IING SYS -	PROJECT 675368: G Network)	75368: GSIN (Global Sensor Integrated						
B. Accomplishments/Planned Program (\$ in Millions)	•									
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total				
MAJOR THRUST: GSIN Increment 1 Missile Defense (MD)		0.000	7.710	0.000	0.000	0.000				
FY 2009 Accomplishments: In FY 2009: N/A										
FY 2010 Plans: In FY 2010: Funds will design and develop Missile Defense (M services. Options and implementation plans will be developed data exposure capabilities and migrate data to a common, XML solution. The MD visualization service and data correlation risk be developed	for the incremental software to mature net-enabled command capability									
FY 2011 Base Plans: In FY 2011: N/A										
FY 2011 OCO Plans: In FY 2011 OCO: N/A										
MAJOR THRUST: GSIN Increment 1 Missile Warning (MW)		0.000	4.340	0.000	0.000	0.000				
FY 2009 Accomplishments: In FY 2009: N/A										
FY 2010 Plans: In FY 2010: Funds will design and develop Missile Warning (M for the incremental software development to mature data expos a common, XML data schema. Funds will also develop net-ena individual sensor and event track data, status and health data, a capabilities and public key infrastructure certificate software manetworks (SIPRnet).	ure capabilities and migrate data to bled command capability solution additional information assurance									

**UNCLASSIFIED** 

R-1 Line Item #121 Page 22 of 28

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: Febr	uary 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0101313F: STRAT WAR PLANN USSTRATCOM	ING SYS -	PROJECT 675368: G Network)	T GSIN (Global Sensor Integrated			
B. Accomplishments/Planned Program (\$ in Millions)							
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
FY 2011 Base Plans: In FY 2011: N/A							
FY 2011 OCO Plans: In FY 2011 OCO: N/A							
MAJOR THRUST: GSIN Increment 1 Interoperability		0.000	3.000	0.008	0.000	0.008	
FY 2009 Accomplishments: In FY 2009: N/A							
FY 2010 Plans: In FY 2010: Funds will develop software for DISA secret and b coordinate Information Assurance documentation; support secu development, non-degradation, and operational testing. Regist appropriate registries/catalogs, system and software accreditation.	urity test and evaluation; conduct ers data schema and services with						
FY 2011 Base Plans: In FY 2011: Funds continue software development for DISA se security test and evaluation; conduct development, non-degrad							
FY 2011 OCO Plans: In FY 2011 OCO: N/A							
Accon	nplishments/Planned Programs Subtotals	0.000	15.050	0.008	0.000	0.008	

R-1 Line Item #121 Page 23 of 28

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
3600: Research, Development, Test & Evaluation, Air Force	PE 0101313F: STRAT WAR PLANNING SYS -	675368: GS	SIN (Global Sensor Integrated
BA 7: Operational Systems Development	USSTRATCOM	Network)	

## C. Other Program Funding Summary (\$ in Millions)

			FY 2011	FY 2011	FY 2011					Cost 10	
<u>Line Item</u>	FY 2009	FY 2010	<u>Base</u>	OCO	<u>Total</u>	FY 2012	FY 2013	FY 2014	FY 2015	<b>Complete</b>	Total Cost
PE 0105921F: Service Support	5.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.000	5.000
to STRATCOM Space Activities											

(O&M)

(Odivi)

## **D. Acquisition Strategy**

GSIN will use ESC, MDA, and other contract vehicles to manage, develop and modernize the combined Missile Warning/Missile Defense data exposure architecture and solution. These contract vehicles are already in place and available.

#### **E. Performance Metrics**

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

**DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0101313F: STRAT WAR PLANNING SYS -

USSTRATCOM

**PROJECT** 

675368: GSIN (Global Sensor Integrated

Network)

## **Product Development (\$ in Millions)**

				FY 2	FY 2010		FY 2011 Base		FY 2011 OCO				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Missile Warning software development	C/CPIF	Lockheed Martin Colorado Springs, CO	0.000	1.000	Jan 2010	0.000	Jan 2011	0.000		0.000	0.000	1.000	0.000
Missile Defense software development	C/CPAF	Lockheed Martin Gaithersburg, MD	0.000	7.000	Jan 2010	0.000	Jan 2011	0.000		0.000	Continuing	Continuing	Continuing
Data Correlation	C/CPAF	MIT/LL Boston, MA	0.000	3.700	Jan 2010	0.000	Jan 2011	0.000		0.000	0.000	3.700	0.000
Common Schema	C/CPAF	BAH Omaha, NE	0.000	2.240	Jan 2010	0.000		0.000		0.000	0.000	2.240	0.000
		Subtotal	0.000	13.940		0.000		0.000		0.000			

#### Remarks

## Support (\$ in Millions)

				FY 2	2010	FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Functional management support	C/CPAF	Various Various	0.000	0.410	Jan 2010	0.002	Jan 2011	0.000		0.002	Continuing	Continuing	0.000
Development Review and Management	C/FP	Various Various	0.000	0.700	Jan 2010	0.006	Jan 2011	0.000		0.006	0.000	0.706	0.000
	•	Subtotal	0.000	1.110		0.008		0.000		0.008			0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force

**DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0101313F: STRAT WAR PLANNING SYS -

USSTRATCOM

**PROJECT** 

675368: GSIN (Global Sensor Integrated

Network)

## **Support (\$ in Millions)**

					2010	FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract

#### Remarks

_				~						
	Total Prior Years Cost	FY 2	2010	FY 2 Ba	2011 se	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	15.050		0.008		0.000	0.008			

#### Remarks

Total Prior Years Cost may include only FY 2009 data.

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force

BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0101313F: STRAT WAR PLANNING SYS -

USSTRATCOM

**PROJECT** 

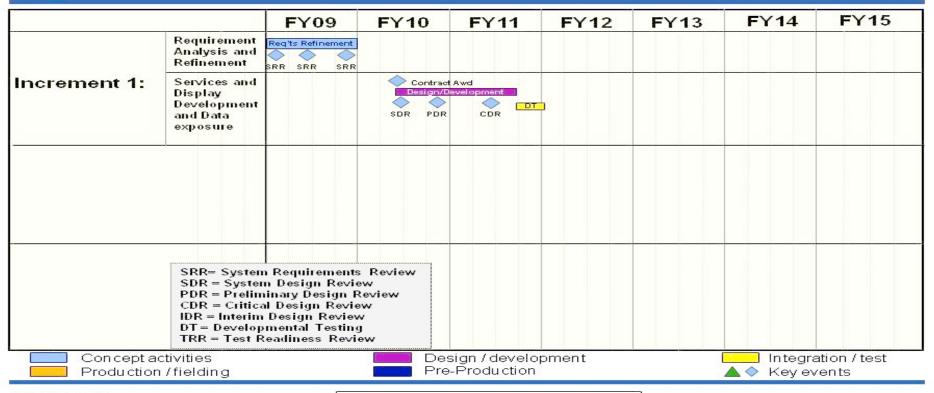
675368: GSIN (Global Sensor Integrated

Network)



# GSIN Schedule

**DATE:** February 2010



PB10 R-Docs

Depicted by in stallation/production flow

R-1 Line Item #121 Page 27 of 28

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
3600: Research, Development, Test & Evaluation, Air Force	PE 0101313F: STRAT WAR PLANNING SYS -	675368: GS	SIN (Global Sensor Integrated
BA 7: Operational Systems Development	USSTRATCOM	Network)	

# Schedule Details

	St	Start		End	
Event	Quarter	Year	Quarter	Year	
Systems Requirement Review Missile Warning Capability	1	2009	4	2009	
Increment 1 contract award	2	2010	2	2010	
Increment 1 System Design Review (MW Capability)	2	2010	2	2010	
Increment 1 Preliminary Design Review (MW Capability)	4	2010	4	2010	
Increment 1 Critical Design Review (MW Capability)	2	2011	2	2011	